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| 09/490,113 | 01/24/2000 | Takao Shimamura | P7156-9070 | 6740 |

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Nikaido Marmelstein Murray and Oram LLP
Metropolitan Square
Suite 330 G Street Lobby
655 Fifteenth Street NW
Washington, DC 20005-5701

EXAMINER

BURKE, GARRETT C

ART UNIT

PAPER NUMBER

2697

DATE MAILED: 09/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/490,113

Applicant(s)

SHIMAMURA ET AL.

Examiner

Garrett Burke

Art Unit

2697

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 3 is/are allowed.
- 6) ☒ Claim(s) 1 and 4-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: L1. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "24" has been used to designate both the potentiometer and the accommodating slots. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The specification is objected to as failing to comply with 37 CFR 1.84(p)(5) because it does not include the following reference sign(s) shown in the drawings: L4. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
5. The disclosure is objected to because of the following informalities: reference character "24" has been used to designate both the potentiometer and the accommodating slot.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

7. Claims 1, 4, 5, 6, 7, 8 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Takigawa et al.. With regard to claim 1, Takigawa discloses a carrier mechanism having accommodating means and carrying means. Takigawa discloses a device in which “a disk selected from a plurality of CD-ROMs...in the inserted magazine is moved into a pickup unit (or in the reverse direction in a discharge state),” (column 1, lines 18-21). The pickup unit in the device of Takigawa carries a recording disc, thus is a carrier means. The magazine in the device of Takigawa accommodates a plurality of recording discs, therefore it is an accommodating means. Takigawa adds: “The pickup unit is elevated by a level-positioning mechanism to be positioned at a predetermined level,” (column 1, lines 30-31), thus the carrier mechanism of Takigawa carries out positioning between the accommodating means and the carrier means. Takigawa discloses that the level-positioning mechanism comprises a motor as a driving means for elevating the pickup unit (column 1, lines 31-42). Takigawa also discloses: “when the pickup unit is moved downward to be stopped at the position corresponding to the target value, after the pickup unit is caused to temporarily pass through the position corresponding to the target

position, the pickup unit is moved upward to be stopped at the position corresponding to the target position. With the above control, when the pickup unit is moved to the lower stop position or the upper stop position, since the pickup unit is always moved from the lower side to the upper side, the influence of hysteresis can be eliminated. Even if the hysteresis is generated, the same condition can be set, and the pickup unit can be stopped at the same stop position," (column 12, lines 40-53). Thus, the control means of the carrier mechanism of Takigawa is operable when the carrier is moved in one direction (downward) to move the carrier means to a position in excess of the desired position and then to move the carrier means to the desired position. Takigawa's statement that "the pickup unit is always moved from the lower side to the upper side," implies that the control means of the device of Takigawa is operable when the carrier is moved in the opposite direction (upward) to move the carrier means to the desired position without exceeding the desired position.

With regard to claim 4, Takigawa teaches: "The position of a play position-8LSB is set as a moving target position, the DC motor is normally started to slide the cam plates...thereby moving the pickup unit upward (downward) toward the target position," (column 12, lines 1-4, and Fig. 9). That the DC motor is started to slide the cam plates so as to move the pickup unit toward the target position implies that the control means of Takigawa include a determining means for determining the direction in which the pickup unit is to be moved, based on the original and target positions of the pickup unit.

With regard to claim 5, the control unit of Takigawa drives the DC motor in a certain way to move the pickup unit towards the target position. This implies that the control unit of

Takigawa includes means for determining the direction that the pickup must travel, and that the pattern for driving the DC motor is based on the result of the determining means.

With regard to claim 6, Takigawa discloses: "the motor drives the cam plate at a first speed until the difference between an output value from the sensor and a target value is equal to a first predetermined value, thereafter, the motor drives the cam plate at a second speed lower than the first speed until the difference between the output value from the sensor and the target value is equal to a second predetermined value smaller than the first predetermined value," (column 3, lines 26-33). Because the cam plates are initially at rest, they must be accelerated in order to be driven at the first speed disclosed by Takigawa. This acceleration corresponds to the accelerated rate at initial activation of claim 6. Because the cam plates move at a second speed lower than the first speed, they must decelerate. This deceleration corresponds to the braking of claim 6. The movement of the cam plates at a second speed which is lower than the first speed corresponds to the minute adjustment of claim 6.

With regard to claim 7, Takigawa discloses: "the motor drives the cam plate at a first speed until the difference between an output value from the sensor and a target value is equal to a first predetermined value, thereafter, the motor drives the cam plate at a second speed lower than the first speed until the difference between the output value from the sensor and the target value is equal to a second predetermined value smaller than the first predetermined value," (column 3, lines 26-33). Thus, the control means of the device of Takigawa adjusts the quantity of minute adjustment by either continuing to drive the carrier means at the second speed or ceasing to drive the carrier means. The manner in which the quantity of minute adjustment is adjusted is determined by the control means and based on the distance over which the carrier means has

been moved (if the distance the carrier means has been moved by minute adjustment is equal to the difference between the "first predetermined value" and the "second predetermined value" then the control means ceases the driving of the carrier means) and also on the remaining distance between a position currently assumed by the carrier means and the desired position (if the distance between a position currently assumed by the carrier means and the desired position is equal to the "second predetermined value" then the control means ceases the driving of the carrier means).

With regard to claim 8, Takigawa discloses a device that comprises "a magazine which accommodates a plurality of recording media," (column 1, lines 16-17). Takigawa further discloses: "a disk selected from a plurality of CD-ROMs...in the inserted magazine is moved into a pickup unit," (column 1, lines 18-21). That a disk is moved from the magazine into the pickup unit implies that the disk is accommodated in the magazine in a detachable manner. Takigawa further discloses that the pickup unit has mounted thereon a head for reproducing information from a disk and a disk-pressure clasper for holding a disk in place (column 4, lines 37-64).

With regard to claim 9, Takigawa discloses: "a CD-ROM changer is designed to be able to insert/discharge a magazine which accommodates a plurality of recording media therein into/from an insertion port," (column 1, lines 14-17).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takigawa et al. in further view of Takahashi. Takigawa teaches all the limitations of claim 10 except that the accommodating rack is always stationary. Takahashi discloses a disc player system in which the recording media are accommodated on a rack that is always stationary. It would have been obvious to one of ordinary skill in the art at the time the invention was made to equip the carrier mechanism of Takigawa with a stationary rack, as taught by Takahashi, instead of a removable rack. The rationale is as follows: One of ordinary skill in the art at the time the invention was made would have been motivated to equip the carrier mechanism of Takigawa with a stationary rack, as taught by Takahashi, instead of a removable rack because a stationary rack may be more easily manufactured and at a lower cost because there are less movable parts involved in a device using a stationary rack.

Allowable Subject Matter

2. Claims 2 and 3 are allowed.

3. The following is an examiner's statement of reasons for allowance: Claims 2 and 3 require the presence of a biasing means to bias the carrier means in a predetermined direction. The closest prior art, disclosed by Takigawa et al., does not refer to any form of biasing means, nor does any other prior art. The presence of a biasing means as disclosed by the applicant represents a significant improvement over the prior art because the biasing means allows for more precise positioning of the carrier means in relation to the accommodating means.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Garrett Burke whose telephone number is (703) 305-1817. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (703) 305-6137. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

GCB
September 20, 2002


WILLIAM KORZUCH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600